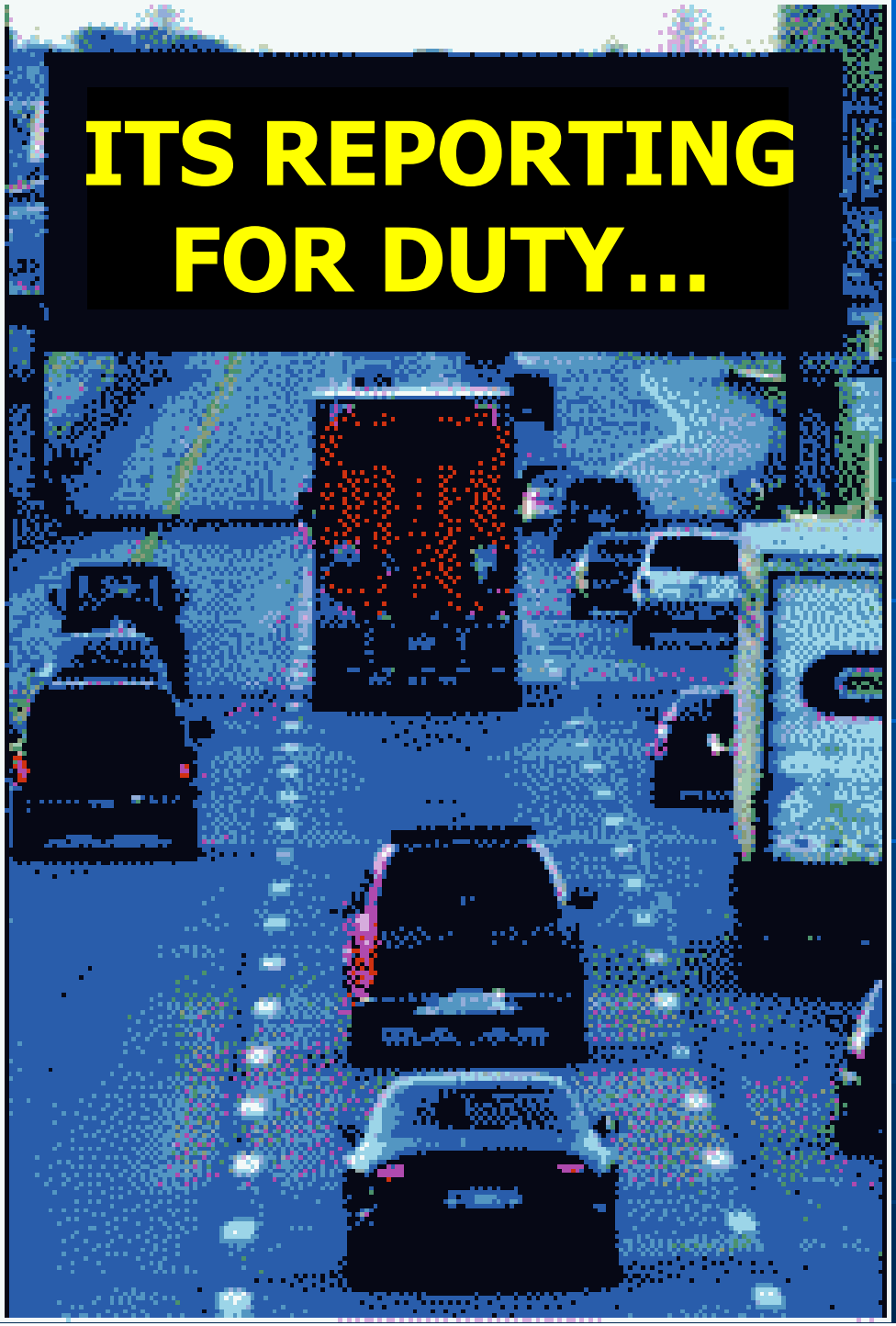


Technology Keeping Georgia on the Move

Presented at the
North Carolina ITS/IM Conference
August 22, 2006
by

Carla W. Holmes, P.E., PTOE

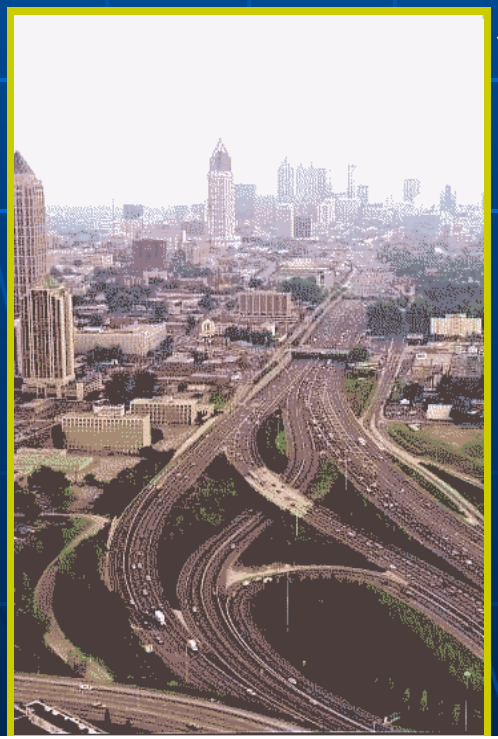
Presentation Overview

- NaviGAtor System Overview
- It's TIME for Traffic Incident Management

NAVIGATOR

Georgia's Statewide Intelligent Transportation System

NAVIGATOR



"...improving safety and reducing the severity and duration of congestion..."

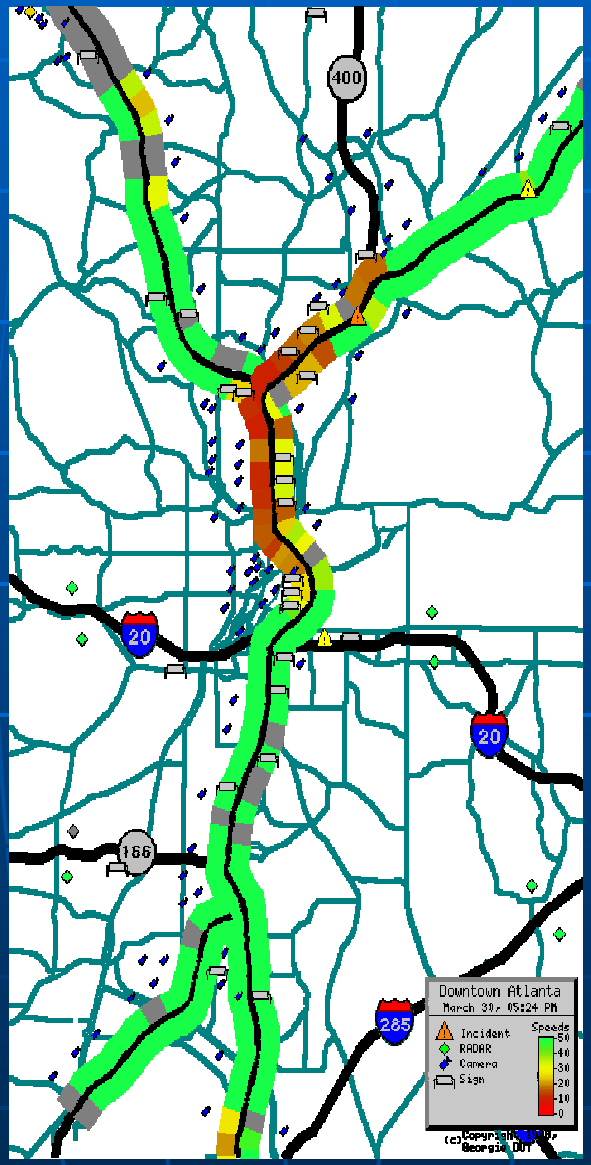
Why Do We Need NaviGAtor?

1953 **2004**

I-75/85 looking south from 14th Street bridge.

Why Do We Need NaviGAtor in Atlanta?

Atlanta has approximately 50% of the daily travel and...

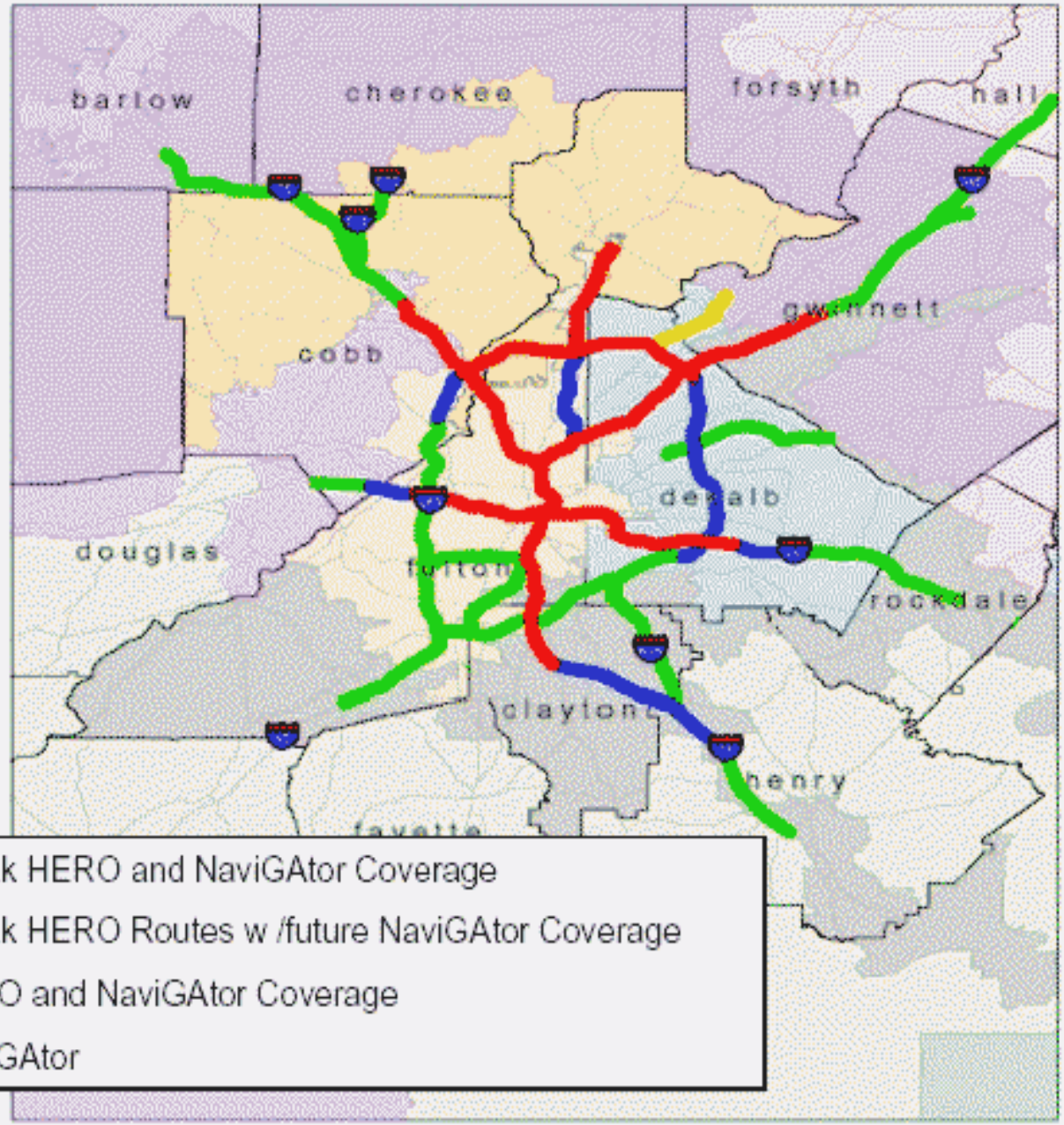


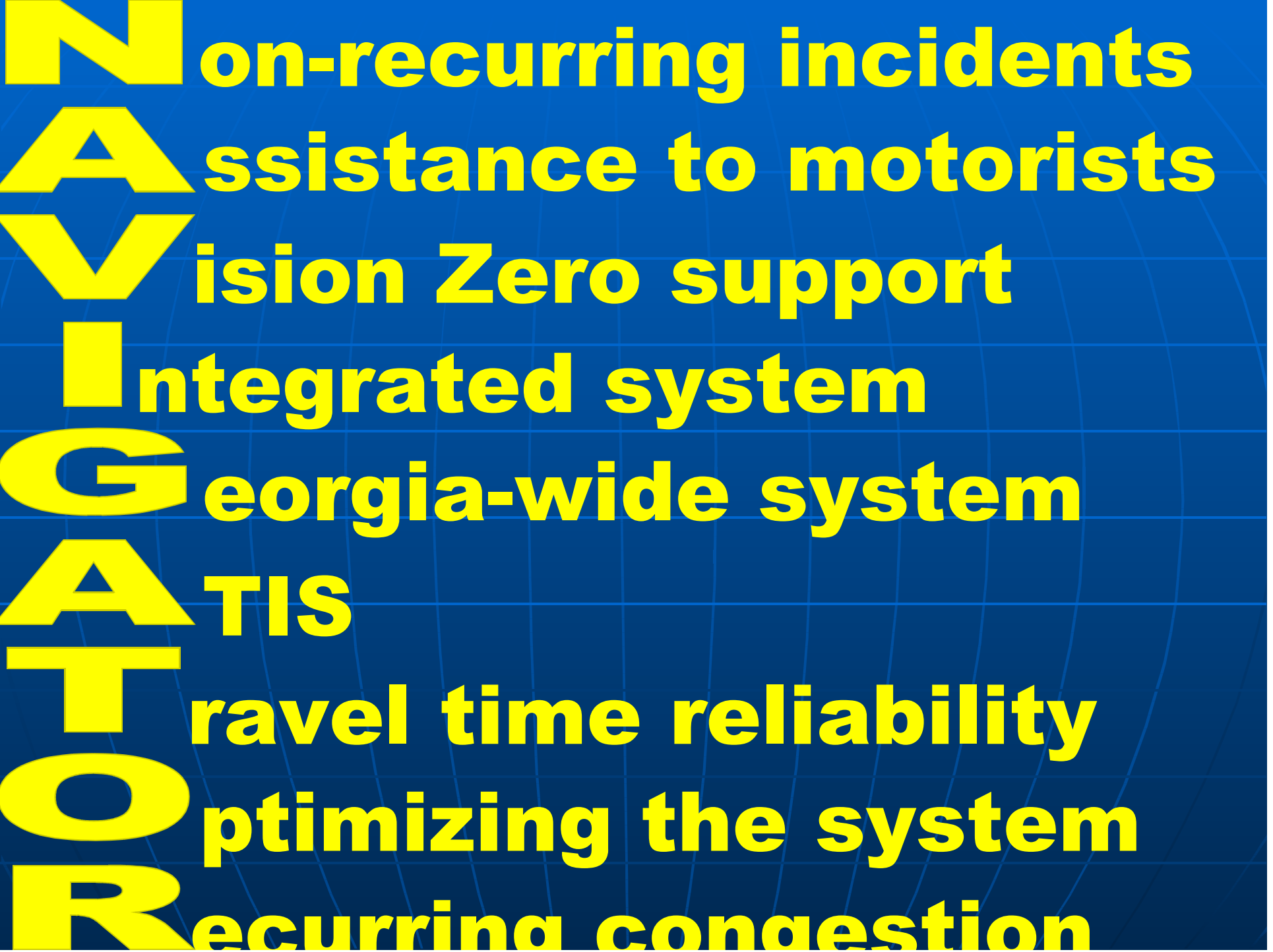
75% of the daily congestion in Georgia.

Fast Forward Transportation Program

- Expand NaviGAtor from 145 to 280 centerline miles of coverage
- Expand HERO coverage from 164 peak hours miles to 286 peak hour miles
- Provide traveler information
- Customize traveler information
- Expand ramp metering
- Optimize and synchronize traffic signal timing
- Maintenance Management Program

Current/Future HERO and NaviGAtor Coverage



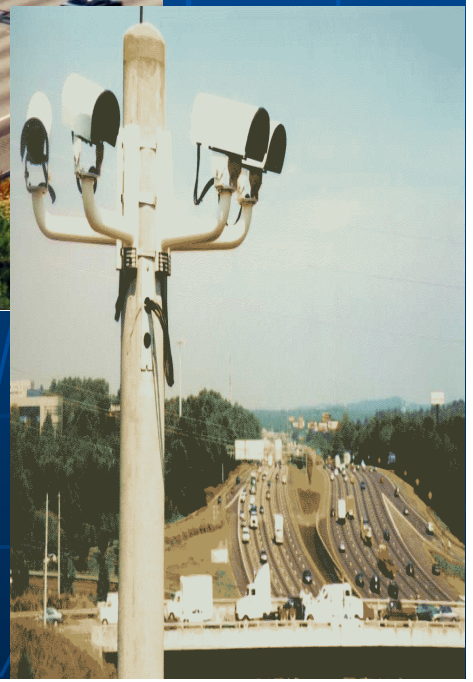

NAVIGATOR
Non-recurring incidents
Assistance to motorists
Vision Zero support
Integrated system
Georgia-wide system
TIS
Travel time reliability
Optimizing the system
Recurring congestion

Transportation Management Centers (TMCs)

- 24 x 7 x 365 operation
- Center to Center Integration
- Incident Management
- Advanced Transportation Management System (ATMS)
- Advanced Traveler Information System (ATIS)

Video Surveillance and Detection Systems

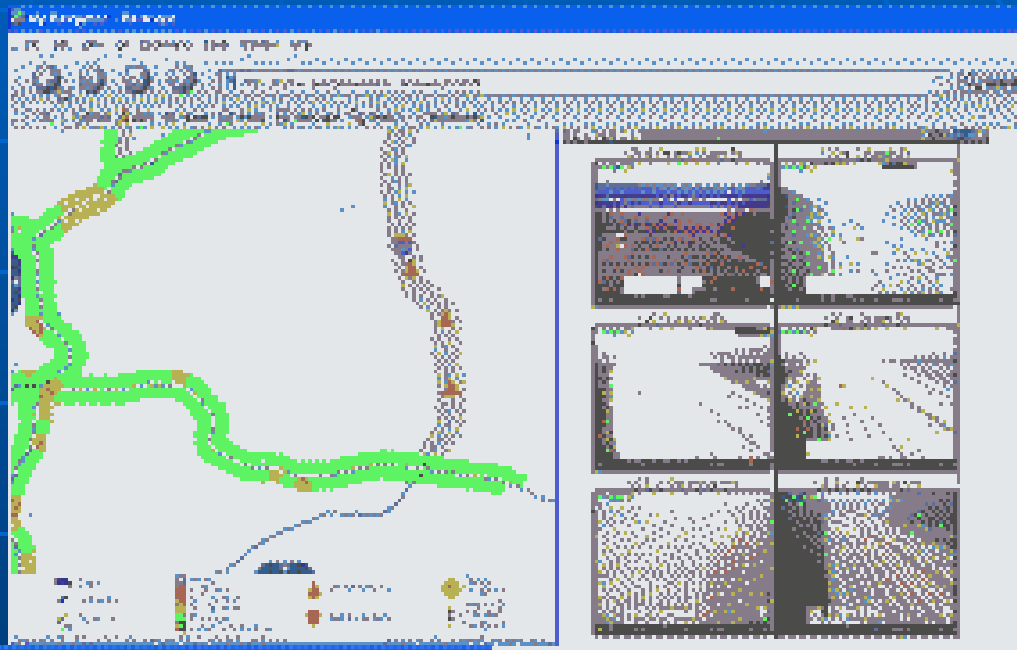
- 341 surveillance cameras on freeways
- 207 surveillance cameras on arterials
- Spaced about one mile apart



- 1,361 video detection cameras
- Spaced every 1/3 mile on freeways
- Continuous collection of speed / volume / density data

Advanced Traveler Information Systems

- NaviGAtor Web Site
- MyNaviGAtor Web Site
- Traveler Information Displays
- *DOT
- 511 coming soon!



Changeable Message Signs (CMSs)

- 101 signs statewide
- Special event alerts
- Incident messages
- Congestion messages
- Construction messages
- AMBER Alerts

Selected Message

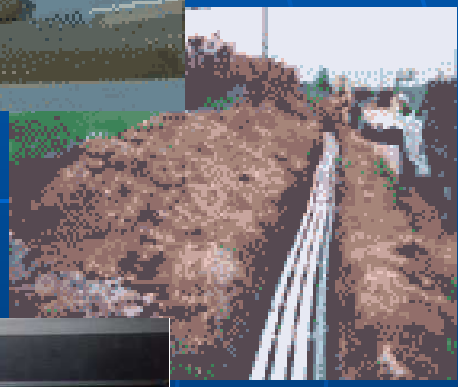
Selected Message

Coastal Evacuation System

- Enhance public safety during coastal evacuations
- ITS components installed on I-16 and I-95
  - 16 CCTV surveillance cameras
  - 5 Highway Advisory Radio (HAR) sites
  - 15 CMSs
  - 10 Loop detector / speed / volume stations

And more...

- 53 weather monitoring stations
- 96 Slo Scan cameras
- 44 alternative detection units
- 9 ramp meters
- Traffic Signal Optimization Efficiency Program
- 454 miles of fiber optic cable
- NaviGAtor Web



Special Events Deployments

- G-8 Summit
- Masters Golf Tournament
- Coastal Evacuation
- Atlanta Motor Speedway
- Others as needed

Multi-state ITS Software Consortium

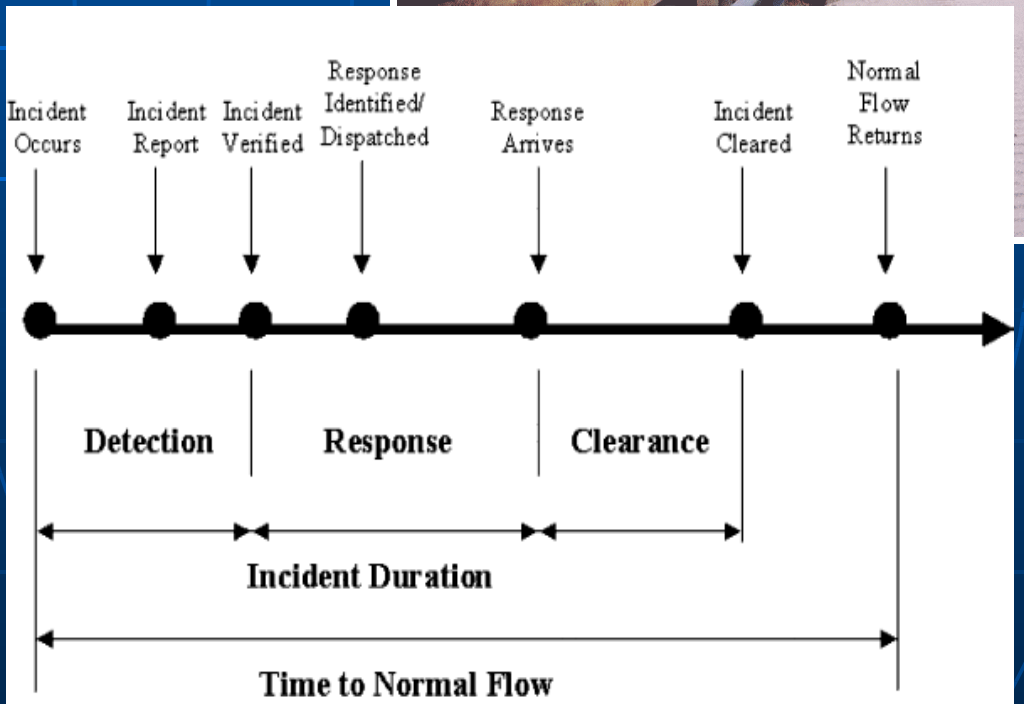
“Committed to reducing development and deployment costs, and promoting open system architecture and interface standards.”

It's TIME for Incident Management

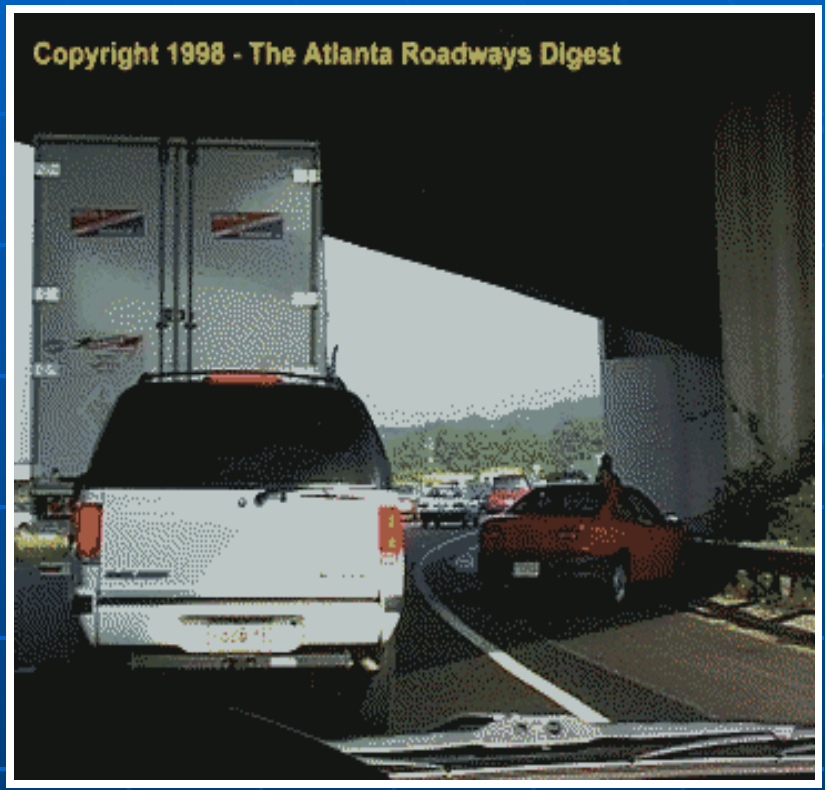
What is an Incident?

What is Incident Management?

- Detection
- Verification
- Response
- Site Management
- Traffic Management
- Clearance
- Recovery



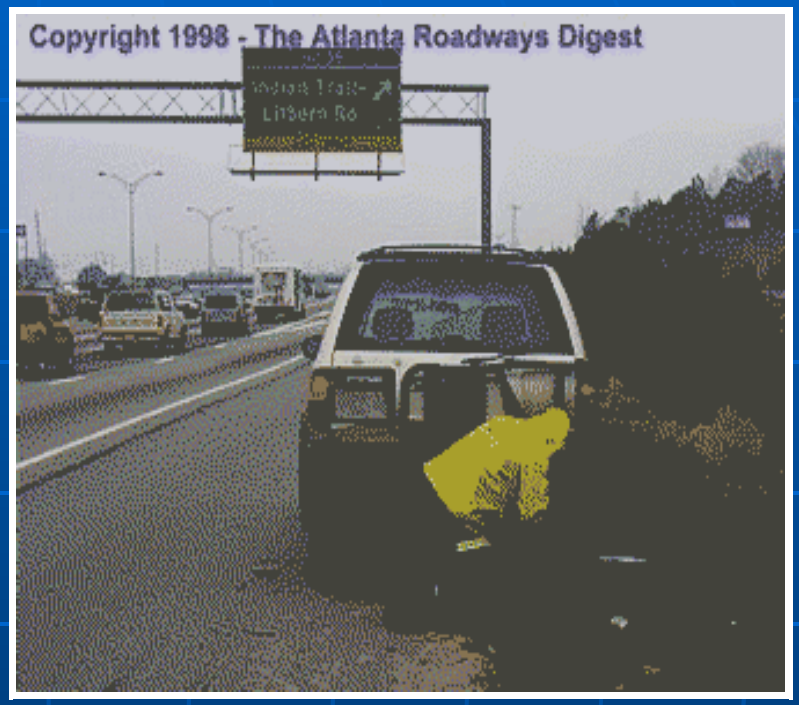
Congestion

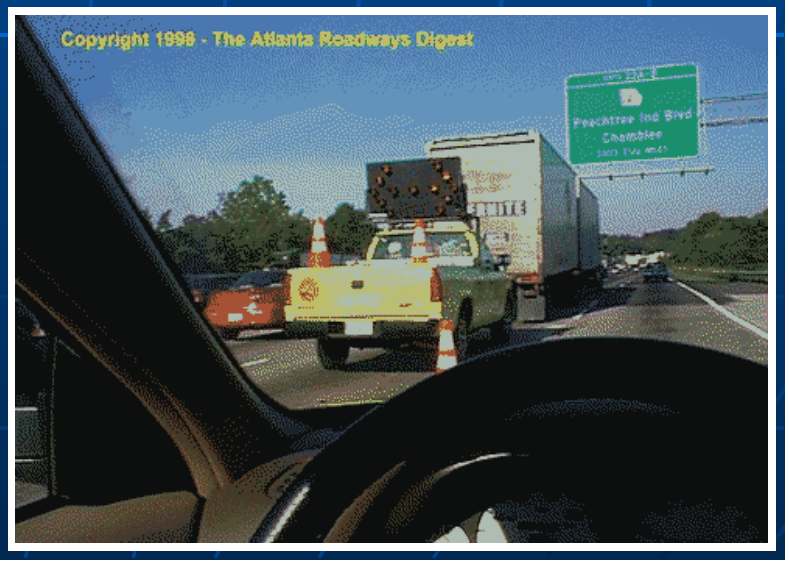


- Annual Delay: 103,618,000 person-hours
- Annual Delay: 67 person-hours per peak traveler
- 52% of Annual Delay caused by traffic incidents
- Annual Excess Fuel Consumed: 71 million gallons
- Congestion Cost: $1,754,000,000

Risk of Secondary Crashes

- 13% of all peak period crashes are direct result of previous incident
- Even stalled vehicles are at risk
- 41% of all shoulder collisions involved injuries
- Secondary crashes represent a more than 600% increase in risk

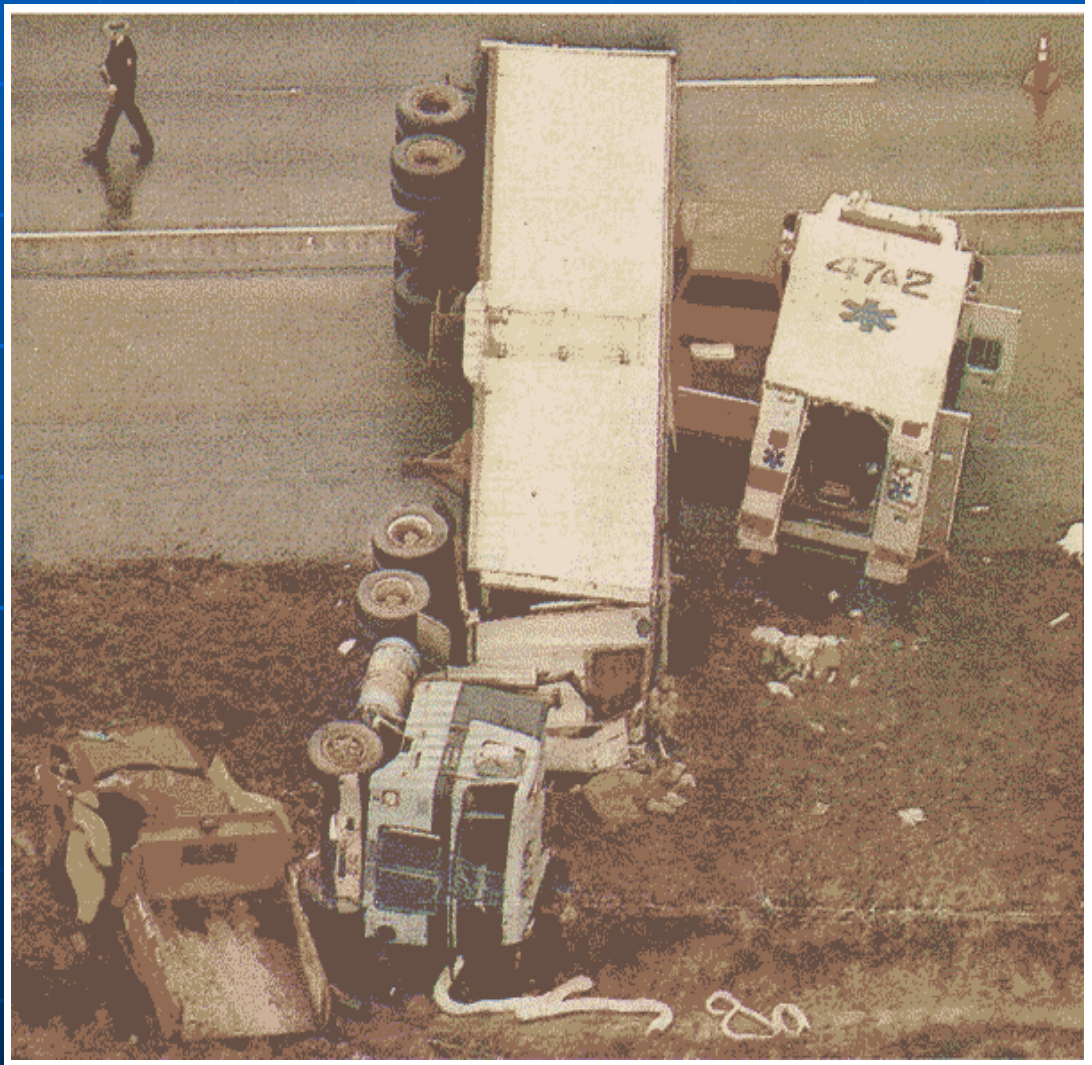




Risk of Secondary Crashes (Risk to Responders)

- Nearly 40% of law enforcement officers killed in line of duty were killed in traffic

- From 1995 to 1997 there has been an 89% increase in the number of firefighters killed in traffic incidents



Other Problems

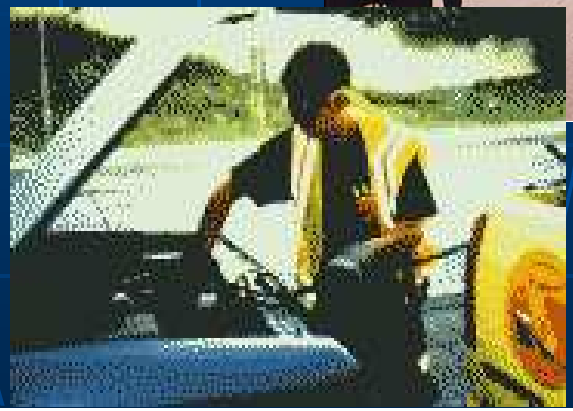
- Lost time and productivity
- Reduced air quality
- Increased response time by emergency responders
- Economic impacts
- Increased fuel consumption
- Increased vehicle maintenance costs
- Increased cost of goods and services
- Reduced quality of life

NAVIGATOR

The Transportation Management Center is committed to enhancing travel safety and transportation efficiency by managing incidents, controlling traffic and providing accurate information to the traveling public.

Highway Emergency Response Operators (HEROs)

- Incident management
- Traffic control
- Motorist assistance
- Special events deployment statewide
- Emergency deployment statewide



HEROs

- HAZMAT Response
- 60 Employees
- 14 Assigned Highway Routes
- 170 Peak Hour Miles
- 223 Non-Peak Hour Miles
- ALADS coming soon

Metro Atlanta
TIME
Traffic Incident Management Enhancement Task

TIME Task Force

- Formed to address the critical issues related to incident management in the Metro Atlanta region
- Made up of concerned incident responders from Metro Atlanta including:
  - Transportation agencies
  - Fire
  - Rescue
  - Police
  - Towing and recovery
  - Emergency medical services
  - HAZMAT
  - Media
  - Other concerned entities

TIME Task Force Mission

"Develop and sustain a region-wide incident management program to facilitate the safest and fastest clearance of roadway incidents, lessening the impact on emergency responders and the traveling public."

TIME Task Force Strategic Vision

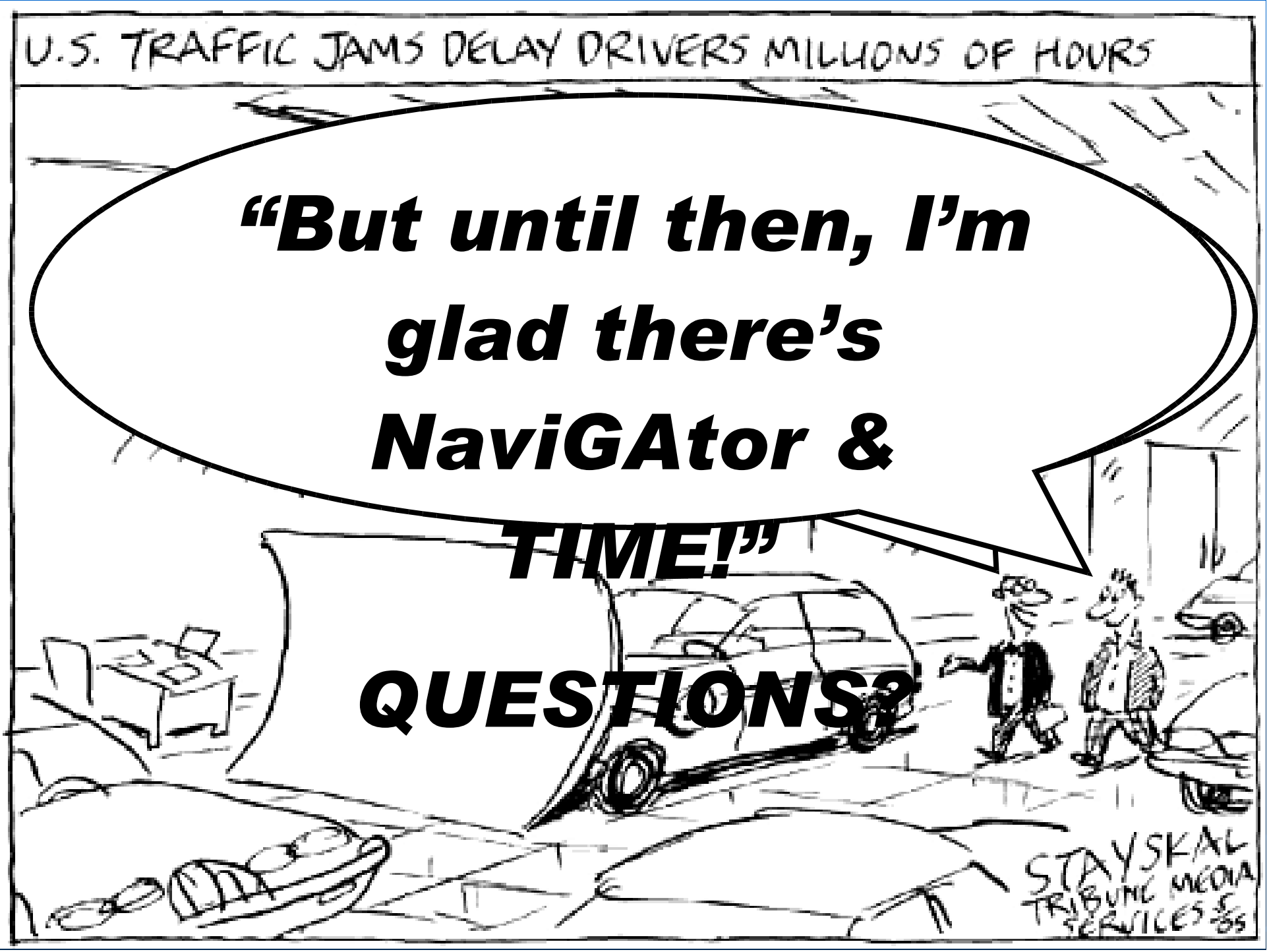
TIME

METRO ATLANTA TRAFFIC INCIDENT MANAGEMENT STRATEGIC VISION

THE PROBLEM

- The Atlanta Region's population has increased by 11.2% since 2000 and is expected to increase by 62.4% by 2030, resulting in a 13-county regional population of 6,005,288[1]. This dramatic growth in the region—and the corresponding traffic demand—continues, and will continue, to exceed the capacity of the highway system.
- Georgia DOT HERO units supported other emergency responders at 10,395 freeway crashes and assisted over 63,000 motorists in 2005, this is a 10% increase from 2004.
- Recurring congestion impacts tens of thousands of motorists daily and has a direct impact on the economy of the region and the quality of life for residents.

THE SOLUTION


U.S. TRAFFIC JAMS DELAY DRIVERS MILLIONS OF HOURS
"But until then, I'm glad there's NaviGAtor & TIME!"
QUESTIONS?
STAYSKAL
TRIBUNE MEDIA SERVICES 5/05